Application No. 10/671,737

Amendment dated August 16, 2006

After Final Office Action of May 16, 2006

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A box-shaped lithium ion secondary cell comprising a

positive electrode and a negative electrode which are spirally wound with inserting a separator

therebetween and a non-aqueous electrolytic solution wherein said negative electrode comprises

a negative electrode active material containing a carbonaceous material having a spacing d₀₀₂ of

0.3360 nm or less where the spacing d_{002} is a plane distance of (002) planes measured by a X-ray

diffraction method, a crystal size Lc in the c-axis direction of at least 70 nm and a R value of

from 0.01 to 0.3 where a R value is a ratio of I_{1350} to I_{1580} in which I_{1350} and I_{1580} are Raman

intensities around 1350 cm⁻¹ and 1580 cm⁻¹ in a Raman spectrum measured by exciting a

carbonaceous material with an argon laser having a wavelength of 514.5 nm, wherein said non-

aqueous electrolytic solution contains 0.5 to 5% by weight of vinylene carbonate or its

derivative, and wherein said negative electrode comprises a mixture of a cellulose ether

compound and a butadiene copolymer rubber in a weight ratio of 1:1 to 1:15 as a binder. binder

in an amount of 2% by weight or less based on the total weight of the negative electrode mixture.

2. (Original) The lithium ion secondary cell according to claim 1, wherein said

carbonaceous material is natural graphite.

2

JWB/JAK/njp

Docket No.: 0020-5181P

Docket No.: 0020-5181P

Amendment dated August 16, 2006 After Final Office Action of May 16, 2006

3. (Previously Presented) The lithium ion secondary cell according to claim 1, wherein said carbonaceous material has a R value of 0.1 to 0.3.

4. (Original) The lithium ion secondary cell according to claim 1, wherein said nonaqueous electrolytic solution contains 1.2 to 4% by weight of vinylene carbonate or its derivative.

5. (Cancelled)

- 6. (Previously Presented) The lithium ion secondary cell according to claim 1, wherein said carbonaceous material has a discharge capacity of at least 350 mAh/g.
- 7. (Previously Presented) The lithium ion secondary cell according to claim 1, wherein said carbonaceous material has a spacing d_{002} of 0.3356 nm or less.
- 8. (Previously Presented) A lithium ion secondary cell comprising a positive electrode and a negative electrode which are spirally wound with inserting a separator therebetween and a 3

Amendment dated August 16, 2006 After Final Office Action of May 16, 2006

non-aqueous electrolytic solution wherein said negative electrode comprises a negative electrode active material containing a carbonaceous material having a spacing d₀₀₂ of 0.3360 nm or less where the spacing d₀₀₂ is a plane distance of (002) planes measured by a X-ray diffraction method, a crystal size Lc in the c-axis direction of at least 70 nm and a R value of from 0.01 to 0.3 where a R value is a ratio of I₁₃₅₀ to I₁₅₈₀ in which I₁₃₅₀ and I₁₅₈₀ are Raman intensities around 1350 cm⁻¹ and 1580 cm⁻¹ in a Raman spectrum measured by exciting a carbonaceous material with an argon laser having a wavelength of 514.5 nm, wherein said non-aqueous electrolytic solution contains 0.5 to 5% by weight of vinylene carbonate or its derivative, and wherein said negative electrode contains a mixture of a cellulose ether compound and a butadiene copolymer rubber in an amount of 5% by weight or less.

9. (Withdrawn) A box-shaped lithium ion secondary cell comprising a positive electrode and a negative electrode which are spirally wound with inserting a separator therebetween and pressed in a flat form and a non-aqueous electrolytic solution wherein said negative electrode comprises a negative electrode active material containing a carbonaceous material having a spacing d_{002} of 0.3360 nm or less where the spacing d_{002} is a plane distance of (002) planes measured by a X-ray diffraction method, a crystal size Lc in the c-axis direction of at least 70 nm and a R value of from 0.01 to 0.3 where a R value is a ratio of I_{1350} to I_{1580} in which I_{1350} and I_{1580} are Raman intensities around 1350 cm⁻¹ and 1580 cm⁻¹ in a Raman spectrum measured by exciting a carbonaceous material with an argon laser having a wavelength of 514.5

Application No. 10/671,737

Amendment dated August 16, 2006 After Final Office Action of May 16, 2006

nm, and wherein said non-aqueous electrolytic solution contains 0.5 to 5% by weight of vinylene carbonate or its derivative.

10. (Cancelled)

Docket No.: 0020-5181P